

Nereidids (Polychaeta) from the Caribbean Sea and adjacent Coral Islands of the southern Gulf of Mexico

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Abstract.—In this study 23 species of nereidids from the Greater Caribbean region collected in different expeditions from 1930 to 1970 are recorded: six species of *Ceratonereis*, five species each of *Nereis* and *Perinereis*, four species of *Neanthes* and one species each of *Platynereis*, *Pseudonereis* and *Stenonereis*. *Neanthes egregicirrata* is removed from the genus *Nereis*, because no homogomph falcigers are present in the atokous form, which is herein described for the first time.

In a recent study, Salazar-Vallejo & Jiménez-Cueto (1997) reported that for the Greater Caribbean region 48 species of nereidids are known. In the same study, 17 species of nereidids were recorded for the state of Quintana Roo's (Mexico) littoral waters, and a key was given for species of the Greater Caribbean Region.

In this study, 23 species of nereidids are recorded. The material comes from several oceanographic programs: collections made at Caribbean islands between 1930 and 1973 and deposited in the Instituut voor Taxonomische Zoölogie (Zoölogisch Museum) University of Amsterdam (ZMUA); collections made by the Smithsonian-Bredin Caribbean Expedition IV in 1960 in Quintana Roo, Mexico, and deposited in the National Museum of Natural History, Smithsonian Institution, Washington, D.C. (USNM); and collections made by two of us (VS-W, VO-R) as part of the *Imca IV* (March 1989) and *Dinamo I* and *III* (March 90 and 91) oceanographic expeditions (see Ochoa-Rivera 1996) and deposited in the Laboratorio de Ecología Costera, Instituto de Ciencias del Mar y Limnología, Universidad Nacional Autónoma de México

(ICML-UNAM), in the coral islands from the southwestern region of the Gulf of Mexico.

In addition, some type specimens from the Naturhistoriska Riksmuseet Stockholm (NRS) and other specimens deposited at the Smithsonian Institution are included here.

Under Material Examined, the records are reported in the following order and as the case may be: the type material is listed first, then the material coming from the Instituut voor Taxonomische Zoölogie, followed by the Smithsonian-Bredin Caribbean Expedition IV material, and ending with the ICML-UNAM material. Dates are abbreviated in order of day, month and year. For each sampling station the number of specimens studied is in parentheses.

Ceratonereis (*Ceratonereis*) *excisa*
(Grube, 1874)

Nereis excisa Grube, 1874:72.

Ceratonereis excisa.—Perkins, 1980:13, fig. 6.—Hartmann-Schröder, 1985:47.—Salazar-Vallejo & Jiménez-Cueto, 1997:363.

Material examined.—ZMUA: Bonaire,

Lac entrance, 200 m West of Cai, 6 m depth, 11 Aug 1967 (3).

Distribution.—Western Atlantic, Cuba, Bonaire and Santa Catarina Island, Brazil.

Habitat.—Shallow waters, in sand trapped among *Thalassia* roots.

Ceratonereis (Composetia) irritabilis
(Webster, 1879)

Ceratonereis irritabilis.—Taylor, 1984: 31.30, figs. 31.25, 31.26.—Salazar-Vallejo & Jiménez-Cueto, 1997:363.

Material examined.—ZMUA: Barbados, 0.5 mi off Holetown, 100 m depth, 19 Nov 1964 (14).

Distribution.—From Virginia, U.S.A., south to Panama.

Habitat.—Soft bottoms, intertidal to continental shelf.

Ceratonereis (Ceratonereis) longicirrata
Perkins, 1980

Ceratonereis longicirrata Perkins, 1980:26, figs. 11–12.

Material examined.—ZMUA: Puerto Rico, Paraguera Mata de la Gata, 12 Sep 1963 (4); St. Martin, Etang aux Poissons, l'Embouchure, 3 Oct 1963 (1); Little Cayman, Owen Island, ca. 0.5 m depth, 7 Jun 1973 (5); Grand Cayman, south of Jackson's Point, 0–0.5 m, 9 Jun 1973 (1); Smithsonian-Bredin Caribbean Expedition IV, Est. 85-60, Ascención Bay, 200–300 yds. southwest of Suliman Point, 17 Apr 1960 (8); ICML-UNAM: *Dinamo I* and *III* expeditions, Alacran Reef, West bay 18 Mar 1990 (1); 18 Mar 1991 (1); Triangulos Oeste reef, West bay, 19 Mar 1991 (1).

Distribution.—Tropical Western Atlantic. Known from the Gulf of Mexico, and Caribbean Sea.

Habitat.—Soft bottoms in the continental shelf, in sediments accumulated among roots of algae attached to coral rocks.

Ceratonereis (Ceratonereis) mirabilis
Kinberg, 1866

Ceratonereis mirabilis Kinberg, 1866: 170.—Perkins 1980:4, figs. 1–4.—Taylor, 1984:31.30, figs. 31.27–31.28.—Hartmann-Schröder, 1985:43, fig. 23.—Salazar-Vallejo & Jiménez-Cueto, 1997: 363, figs. 5, 20, 21, 42, 44.

Material examined.—Brazil, 09°S, 33 m, Werngren Coll., (Syntype, NRS 539). ZMUA: Bonaire, Kralendijk, near Pasanggrahan, Sep 1930 (1); St. Barts, S. Public near Gustaria, 4 Jun 1949 (1); North Bimini, Bahamas, 1 km offshore, 17 Aug 1949 (29); 18 Aug 1949 (13); Florida, east of Soldier Key, 2 m, 5 Sep 1963 (1); Barbados, 0.5 mi of Holetown, 100 m, 19 Nov 1964 (28) Little Cayman, South Hole Sound, The Bight; 0.5–1 m, 5 Jun 1973 (71); Jamaica, Drunkemans, Key, 0–0.5 m, 15 Jun 1973 (7). USNM: Smithsonian-Bredin Caribbean Expedition IV, Est. 11-60, Mujeres Island, 29 Mar 1960 (1); Est. 41-60, Espiritu Santo Bay, north shore, near Lawrence Point, 6 Apr 1960 (3); Est. 44-60, North end of Ascención Bay, small inlet behind Allen Point, 7 Apr 1960 (4); Est. 52-60, Ascención Bay, just behind center of Nicchehabin Reef, east of Allen Point, 10 Apr 1960 (6); Est. 53-60, Ascención Bay, 10 Apr 1960 (6); Est. 61-60, near Allen Point light, 12 Apr 1960 (129); Est. 67-60, Ascención Bay, 13 Apr 1960 (12); Est. 68-60, Ascención Bay, Allen Point, 13 Apr 1960 (2); Est. 72-60, Ascención Bay, central part of Nicchehabin Reef, 14 Apr 1960 (7); Est. 77-60, North end of Ascención Bay, beach just east of Halfway Point, 15 Apr 1960 (26); Est. 79-60, Ascención Bay, the electric light over ship's side at anchorage, 15 Apr 1960 (2); Est. 83-60, Ascención Bay, mangrove inlet behind Allen Point light, 16 Apr 1960 (2); Est. 85-60, Ascención Bay, along shore near Suliman Point, 17 Apr 1960 (2); Est. 91-60, Inner side, Nicchehabin Reef, 1/3 distance from north end Ascención Bay, 18 Apr 1960 (20); Est. 93-60, north end Ascención Bay,

shore near Halfway Point, 18 Apr 1960 (2); Est. 95-60, Ascención Bay, Suliman Point, 19 Apr 1960 (5); Est. 100-60, north of Santa María Point, south end of Cozumel Island, 21 Apr 1960 (3); Est. 109-60, south end of Cozumel Island, 1¼ miles north of Santa Maria Point, 22 Apr 1960 (2).

Distribution.—Western Atlantic. Greater Caribbean region, Bermuda, Florida, Bahama Islands, south to Barbados and the Netherlands Antilles. Santa Catarina, Brazil.

Habitat.—Mixed bottoms, coral reefs, macroalgae, seagrass beds, shallow waters down to 60 m.

Ceratonereis (Ceratonereis) singularis
(Treadwell, 1929)

Ceratonereis singularis Treadwell, 1929:1, figs. 1–8.—Perkins, 1980:17, figs. 7–10.—Hartmann-Schröder, 1985:45, figs. 36–39.—Salazar-Vallejo et al., 1990:213.—Bastida-Zavala, 1993:29.

Material examined.—ZMUA: Antigua, Dickinson Bay, 26 Jul 1967 (5); 28 Jul 1967 (19).

Distribution.—Amphi-American. Gulf of California south to Panama, North Carolina south to Colombia.

Habitat.—Rocky substrates of the intertidal zone, sandy bottoms in the continental shelf.

Ceratonereis (Compositia) versipedata
(Ehlers, 1887)

Nereis (Ceratonereis) versipedata Ehlers, 1887:116, pl. 36, figs. 5–10.

Ceratonereis versipedata.—Day, 1973:39.—Gardiner, 1976:148, fig. 140.—Taylor, 1984:31.30, figs. 31.23; 31.24a–f.

Material examined.—ZMUA: Curaçao, Piscadera Baai, north part, 2nd buoy, 31 Oct 1963 (2); central part, 3rd buoy, 31 Oct 1963 (2); Piscadera Baai, northeast point, 11 Dec 1963 (3). USNM: Smithsonian-Bredin Caribbean Expedition IV, Est. 41-60, Espiritu Santo Bay, westward side of reef

to east of anchorage, 6 Apr 1960 (3); Est. 52-60, Ascención Bay, just behind center of Nicchehabin Reef, east of Allen Point, 10 Apr 1960 (1); Est. 53-60, Ascención Bay, 10 Apr 1960 (1); Est. 77-60, north end of Ascención Bay, shore just east of halfway point, 15 Apr 1960 (1). ICML-UNAM: *Dinamo III* expedition, Cayo Nuevo, 24 Mar 1991 (2); Cayo Arcas, 17 Mar 1991 (6).

Distribution.—Western Atlantic. Georgia, U.S.A., Gulf of Mexico and Caribbean Sea.

Habitat.—Soft bottoms and among interstices of coralline rocks, intertidal to 40 m.

Neanthes acuminata (Ehlers 1868)

Nereis acuminata Ehlers 1868:552.

Nereis (Neanthes) arenaceodonta: Pettibone, 1963:162, figs. 44i, 45e.

Nereis (Neanthes) acuminata: Day, 1973:41.—Gardiner, 1976:149, fig. 15e–f.

Neanthes acuminata: Taylor, 1984:31.15, figs. 31.11; 31.12a–e.

Material examined.—ZMUA: Florida, Key Biscayne, northwest swamp (mangrove ditch), 31 Aug 1963 (2); Puerto Rico, Parguera, Mata de the Gata, 12 Sep 1963 (2); Curaçao, Piscadera Baai, northeast point, 25 Nov 1963 (1); 11 Dec 1963 (3); 18 Dec 1963 (6); central part, southeast point, 13 Dec 1963 (7); Jamaica, Kingston Harbour, Inlet W. of airport, 0–1 m, 7 May 1973 (1). USNM: Smithsonian-Bredin Caribbean Expedition IV, Stn. 17-60, Mujeres Harbor, 30 Mar 1960 (1); Stn. 83-60, Ascención Bay, mangrove inlet behind Allen Point light, 16 Apr 1960 (1); Stn. 100-60, north of Santa Maria Point, south end of Cozumel Island, 21 Apr 1960 (5).

Distribution.—Western Atlantic. From North Carolina down to the Gulf of Mexico.

Habitat.—Soft bottoms of the continental shelf.

Neanthes egregicirrata (Treadwell, 1924)
(Fig. 1a–h, 2a–f)

Nereis (Leptonereis) egregicirrata Treadwell, 1924:13, fig. 24.

Material examined.—Antigua Island, English Harbor, Coll. University of Iowa, 07/1918 (1, Lectotype USNM 071733), (4 Paratypes USNM 020224); ZMUA: Barbados Island, Conset Bay (St. John), 7 Jul 1967 (1); Little Cayman, South Hole Sound, The Bight, 0.5–1 m, 5 Jun 1973 (2). USNM: Smithsonian-Bredin Caribbean Expedition IV, Stn. 67-60, Ascención Bay, behind central part of Nicchehabin Reef, 13 Apr 1960 (2); Stn. 72-60, Ascención Bay, central part of Nicchehabin Reef, 14 Apr 1960 (2); Stn. 79-60, Ascención Bay, the electric light over ship's side at anchorage, 15 Apr 1960 (2); Stn. 85-60, Ascención Bay, along shore near Suliman Point, 17 Apr 1960 (1); ICML-UNAM: Ascención Bay, Pájaros Point, 6 Oct 1983 (1); Puerto Morelos, La Bocana, Francisco Solís-Marín coll., 17 Feb 1995 (9).

Diagnosis.—Atokous specimen collected in Little Cayman complete, light yellow, 14 mm long, 0.5 mm wide, with 83 setigers, prostomium and palps pigmented. Anterior median region of each segment with transverse diffusely pigmented stripe. Prostomium slightly longer than wide, with one pair of frontal small cirriform antennae. Two pairs of large eyes with a lens, in trapezoidal arrangement. Palps biarticulate, globose, with conical palpostyle. Peristomium with 4 pairs of tentacular cirri, largest pair extending to setiger 5 (Fig. 1a).

Paragnaths arranged on pharyngeal areas as follows: I: 0; II: 15 cones in 2 rows; III: 3 in one row; IV: 14 in two rows; V: 0; VI: 4 cones in a row; VII–VIII: 6 in one row. Jaws yellowish with 7 teeth.

First two parapodia uniramous, third biramous, notopodia with two ligules, dorsal one digitiform, short; median ligule larger, basally wide. Neuropodia with presetal lobe distally conical, postsetal lobe rounded, ventral ligule subulate. Dorsal cirrus wide,

inserted proximally on ligule, larger than ventral cirrus (Fig. 1b). Sixth parapodium with dorsal cirrus elongate, with constriction in median part of cirrus, which results in distal cirristyle. Notopodial median ligule and neuropodial ventral ligule rounded distally; neuropodial postsetal lobe conical. Ventral cirri inserted proximally on body (Fig. 1c). Notopodial ligules of anterior parapodia posterior to setiger 6 rounded, shorter than in parapodia anterior to setiger 6. Neuropodial ventral ligule subulate (Fig. 1d). Notopodial ligules of posterior parapodia triangular, median ligule larger, slenderer than dorsal ones. Neuropodial postsetal lobes conical distally, presetal one rounded, ventral ligule slender (Fig. 1e).

All notopodial setae homogomph spinigers with long and slender appendix, finely spinulate on margin. Supraacicular neurosetae from first biramous parapodium, and from modified setiger 6, homogomph spinigers similar to notopodial ones, and heterogomph spinigers with short appendix, with long spines on margin (Fig. 1f); supraacicular neurosetae posterior to sixth parapodia, homogomph spinigers and heterogomph falcigers, with long and slender appendix, with spinulations along margin, distally ending in blunt tooth (Fig. 1g). Neuropodial infraacicular setae from first biramous parapodium to setiger 5, heterogomph spinigers with short appendix; neuropodial infraacicular seta from modified setiger 6 throughout body including heterogomph spinigers and falcigers in anterior parapodia, with latter similar to supraacicular ones, and in median and posterior parapodia falcigers with short, triangular appendix, distally ending in curved tooth, with margin covered by one row of long spines (Fig. 1h).

Pygidium with pair of slender anal cirri. Anus terminal.

Epitokous stage.—Epitokous male, 8 mm long and 1.7 mm wide including parapodia, with 70 setigers, no coloration pattern. Body divided into 3 regions: pre-epitocal formed by two regions: anterior one, from

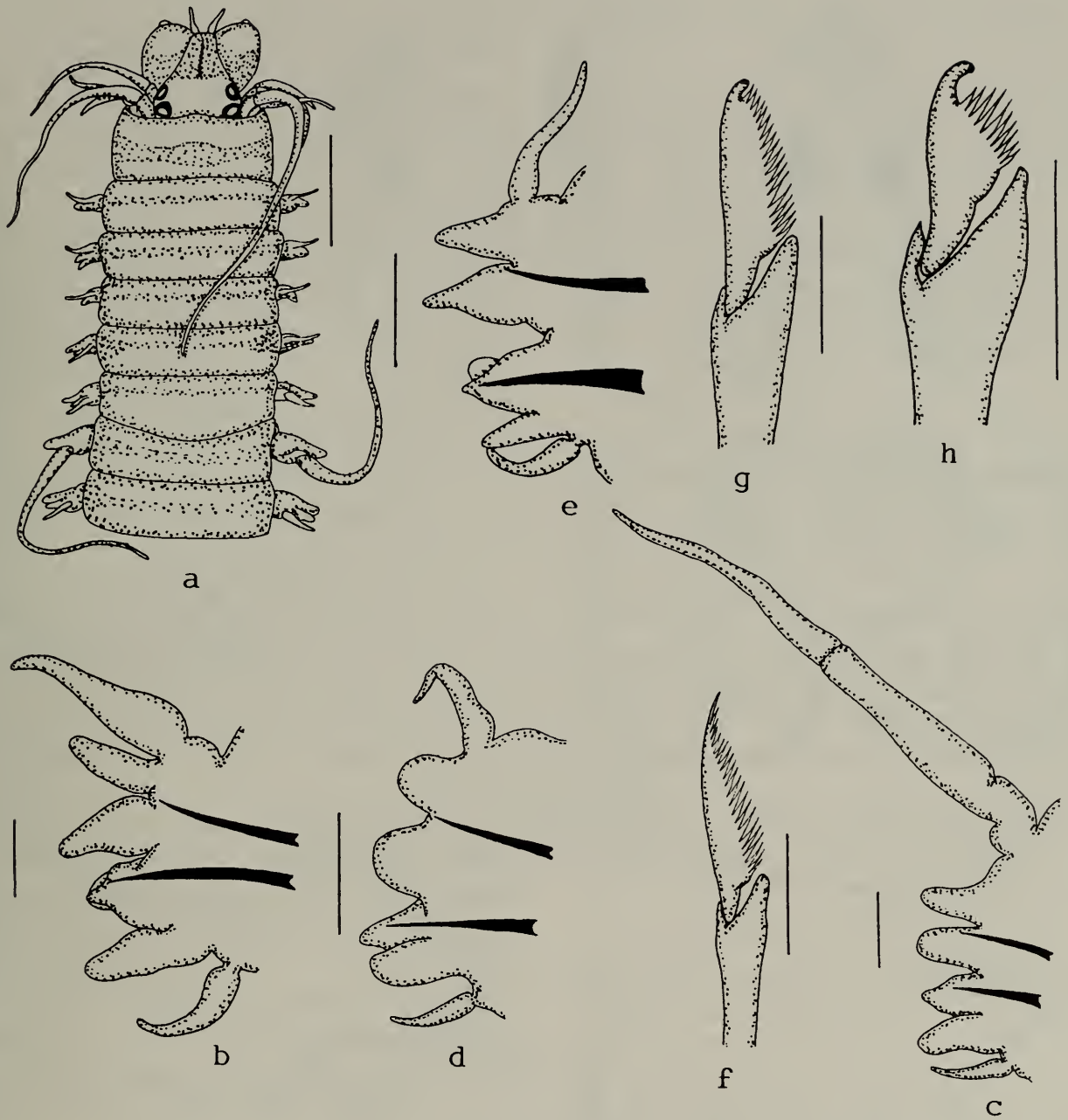


Fig. 1. *Neanthes egregicirrata* (atoke): a, Anterior end, dorsal view; b, 3rd setiger, anterior view; c, 6th setiger, anterior view; d, 10th setiger, anterior view; e, 32th setiger, anterior view; f, Neuropodial heterogomph spiniger of supraacicular position from setiger 3; g, Neuropodial heterogomph falciger of infraacicular position from setiger 10; h, Neuropodial heterogomph falciger of infraacicular position from setiger 32. Scale bars: a = 0.5 mm; b-e = 150 μ m; f-h = 15 μ m.

setigers 1 to 5, with notopodial and neuropodial ventral ligules digitate, neuropodial postsetal lobes conical. Dorsal cirrus enlarged, with a small cirrostyle attached near distal end (Fig. 2b). In setiger 6, as in atokous material, dorsal cirrus modified, wide proximally slender distally (Fig. 2a). From setigers 7 to 16, parapodia with notopodium formed by two triangular ligules, and a notopodial digitiform superior lobe (Fig. 2c). From setiger 17, parapodia modified for

swimming, notopodia with one small lamella associated with dorsal cirrus, with crenulations. Neuropodia with elongate lamella associated with the postsetal lobe. Ventral cirri with two small lamellae (Fig. 2d).

In pre-epitokous setigers notosetae homogomph spinigers. First 5 setigers with supraacicular neurosetae homogomph spinigers and heterogomph falcigers with slender appendix (Fig. 2e); infraacicular spini-

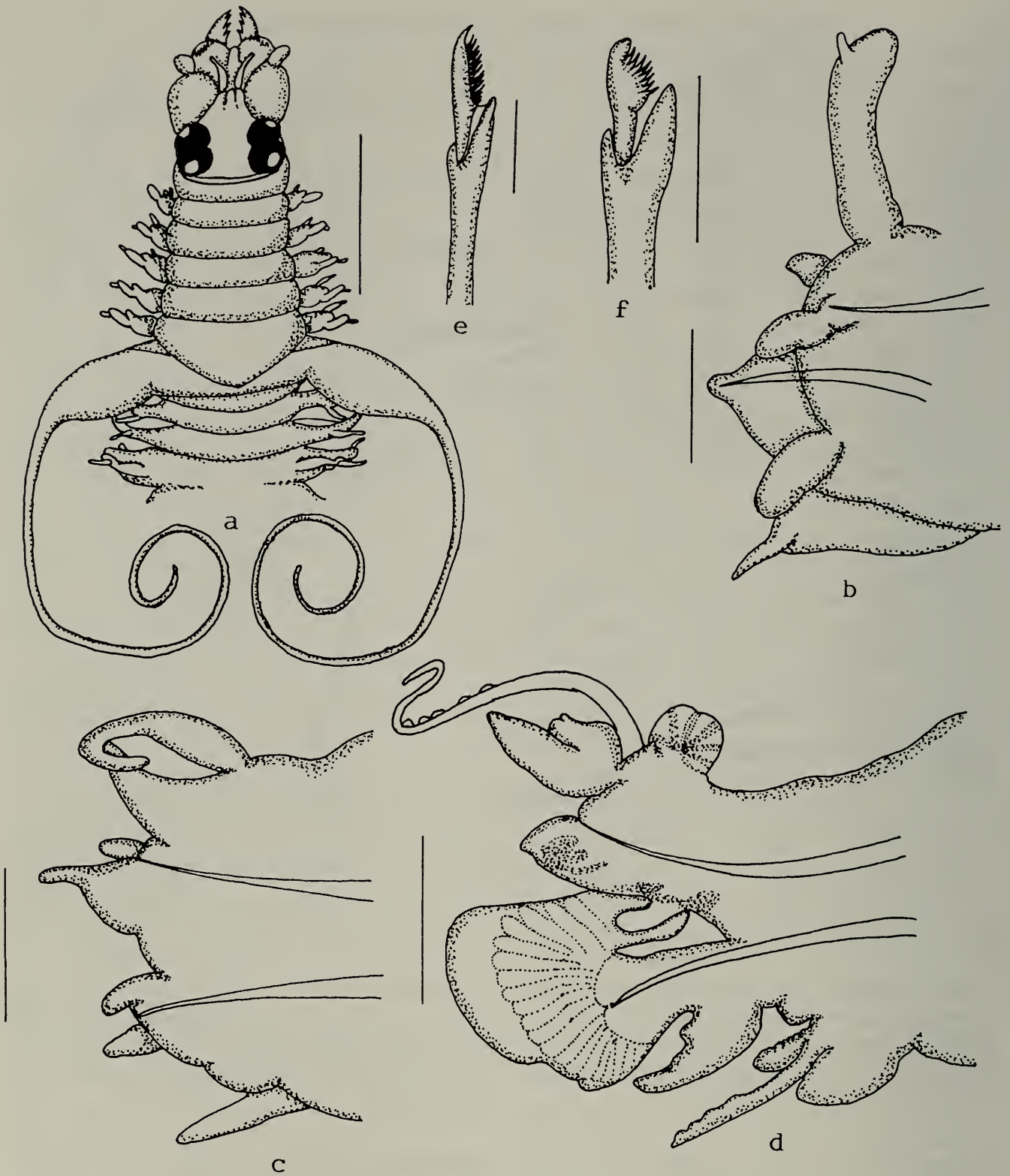


Fig. 2. *Neanthes egregicirrata* (epitokous male): a, Anterior end, dorsal view; b, 5th setiger, anterior view; c, 15th setiger, anterior view; d, 44th setiger, anterior view; e, Neuropodial heterogomph falciger of supraacicular position from setiger 5; f, Neuropodial heterogomph falciger of supraacicular position from setiger 15. Scale bars: a = 1 mm; b-d = 150 μ m; e-f = 15 μ m.

gers heterogomph. Parapodia posterior to modified setiger with supraacicular neurosetae homogomph spinigers and heterogomph falcigers with short and triangular appendix (Fig. 2f); only heterogomph fal-

cigers in infraacicular position. Setae from epitocal region paleae with homogomph articulation, appendix oar-shaped.

Pygidium with pair of short anal cirri. Anus terminal.

Discussion.—The holotype of this species was described from an epitokous specimen. Before this study, the atokous form was unknown. When examining the atokous specimens, it was noted that no homomorph notopodial falcigers are present, which means that it should be included in the genus *Neanthes*. The dorsal elongate cirrus in the sixth setiger persists in the atokous phase and as previously thought, is not exclusive of the epitokes. F. Solís-Marín (pers. comm.) observed the epitokes in the water column and reported that they appeared to gyrate one around the other, until they stopped completely. Apparently, the modified dorsal cirri are used to hold the animals to each other during copulation.

In the type material examined from *Platynereis abnormis* Horst (1924) (ZMA Pol 730) it was noted that the dorsal cirri are modified as in *N. egregiacirrata*, except that this happens on setiger 7, rather than on setiger 6.

Distribution.—Western Atlantic. Known from the Caribbean Sea, Quintana Roo, Mexico, Antigua Island, Puerto Rico, Barbados and Little Cayman Island. This is the first record for Mexico.

Habitat.—Atokous specimens collected among corals, epitokes collected close to the surface with zooplankton net attracting the organisms with a bright light.

Neanthes micromma (Harper, 1979)

Nereis (Neanthes) micromma Harper 1979: 91, figs. 1–11.

Neanthes micromma: Taylor, 1984:31.17, figs. 31.14a–h.—Hernández-Alcántara & Solís-Weiss, 1991:255.

Material examined.—ICML-UNAM: *Imca IV* expedition, Cayo Arcas, 3 Oct 1989 (4); 4 Oct 1989 (1); *Dinamo III* expedition, Cayo Nuevo, 24 Mar 1991 (1).

Distribution.—Amphi-American. Western coasts of Mexico, Gulf of Mexico.

Habitat.—Sandy muds, shallow waters down to 50 m.

Neanthes succinea (Frey & Leuckart, 1847)

Nereis (Neanthes) succinea: Pettibone, 1967:165, fig. 44a–e.—Day 1967:321, fig. 14a–e.—Hartmann-Schröder, 1971: 200, figs. 64–65.

Neanthes succinea: Hartman, 1945:17, pl. 3, figs. 1–2.—Rioja, 1946:205, pl. 1, figs. 1–2.—1962:165.—Imajima, 1972:108, fig. 32a–k.—Taylor, 1984:31.17, figs. 31.16a–h.

Material examined.—ZMUA: Margarita, Punta de Piedra, 21 Jan 1964 (2); Surinam, Suriname River, wreck of Goslar, 7 Mar 1964 (2); Jamaica, Kingston Harbour, inlet west of airport, 7 May 1973 (1).

Distribution.—Cosmopolitan in tropical to temperate waters. Atlantic from the North sea south to South Africa, and from Massachusetts south to Uruguay; Pacific Ocean from California south to Panama; Indian Ocean.

Habitat.—Among rhizoids of algae attached to rocks.

Nereis allene Pettibone, 1956

Nereis allene Pettibone, 1956:287, figs. 4b–f, 6a–h.

Material examined.—Puerto Rico, 15 Aug 1955 (Holotype, USNM 27778); Antigua, Jul 1918 (4 Paratypes USNM 27779). ZMUA: North Bimini, Bahamas, 17 Aug 1949 (56); 18 Aug 1949 (20).

Discussion.—The examined specimens are epitokes collected with a zooplankton net in the water column. Those are morphologically similar to the type specimens. However, in parapodia of setigers 1–6, the notopodium is slightly modified, with cylindrical dorsal cirri. In the original description, Pettibone mentioned that, in those specimens, paragnaths are present in both pharyngeal rings, but she does not detail their distribution. In the specimens collected in North Bimini the following pharyngeal arrangement is found: Area I: 1 cone, II: 13–15 cones in two rows; III: 18–22

small cones in an oval; IV: 25 cones in a crescent, with 3–4 rows; V: 0; VI: 3 cones in an irregular row; VII–VIII: 5 cones in a row. Jaws amber colored with 6 stout teeth.

Distribution.—Known only from the greater Caribbean region, Puerto Rico, Antigua, Barbados and Bahamas.

Habitat.—Undescribed for atokous specimens, epitokes collected with zooplankton net in the water column.

Nereis falsa Quatrefages, 1865

Nereis falsa: Fauvel, 1923:337, fig. 129e–m.—Day, 1967:317, fig. 14.7k–o (with synonymy).—Day 1973:41.

Nereis pelagica occidentalis Hartman, 1945:20, pl. 4, figs. 1–6.—1951:46.

Nereis (Nereis) occidentalis: Pettibone, 1956:291, fig. 7a–d, 8a–f.

Nereis occidentalis.—Dueñas, 1981:88, pl. 8, fig. a–f.

Material examined.—ZMUA: Bonaire, Lagoen Southeast, corner, 28 Oct 1930 (3); Bonaire, Lagoen south, 19 Sep 1967 (10); Curaçao, Piscadera Baai, N., 2nd buoy, 31 Oct 1963 (16); Curaçao, Ironbeam of mouth of sewer-pipe, 31 Oct 1963 (47); Curaçao, Piscadera Baai, northeast, 11 Oct 1963 (86); Curaçao, Piscadera Baai, northeast, 25 Nov 1963 (66); Curaçao, Piscadera Baai, northeast, 11 Dec 1963 (2); Curaçao, Piscadera Baai, central part, southeast, 31 Oct 1963 (10); Curaçao, Piscadera Baai, central part, southeast, 13 Dec 1963 (5); Curaçao, Piscadera Baai, central part, southeast, 18 Dec 1963 (1); Curaçao, St. Jorisbaai, northwest bay, 25 Feb 1970 (46); Curaçao, Piscadera Baai, inner bay north, islet, 26 Sep 1967 (20); Margarita, Puente de La Restinga, 11 Jan 1964 (1); Guadeloupe, Rivière Salée la Manche à Eau, 16 Jul 1967 (8); Jamaica, Kingston Harbour, inlet west of airport, 7 May 1973 (7).

Distribution.—Warm and tropical Atlantic from France to West Africa and North Carolina to the Gulf of Mexico; Mediterranean; South Africa to Madagascar.

Habitat.—Rocky bottoms, associated with algal mats and *Rhizophora* roots.

Nereis panamensis Fauchald, 1977

(Fig. 3a–g)

Nereis panamensis Fauchald, 1977:29, fig. 6d–i.—San Martín, 1994:6, fig. 2.—Sallazar-Vallejo & Jiménez-Cueto, 1997:374.

Material examined.—ZMUA: Klein Curaçao, west shore, 1 Oct 1948 (19); Anguilla, north sandy ground, 19 Apr 1949 (2); Anguilla, Cocus bay, north, 3 Aug 1973 (5); St. Barts, S. Public, near Gustaria, 4 Jun 1949 (21); Saba, East Fort Bay, 21 Jul 1949 (8) Saba, Covebay at flat point (tidal area), 5 Oct 1963 (22); Aruba, Matmok, Arasji, 14 Aug 1955 (5); St. Vincent, Calliwater Bay near Johnson Pt., 10 Jul 1967 (2); Jamaica, Drunkemans Key, 15 Jun 1973 (1); ICML-UNAM: *Imca IV* expedition, Cayo Arcas, 3 Oct 1989 (27); 4 Oct 1989 (23); *Dinamo I, III* expeditions, Triangulos Oeste reef, East bay, 19 Mar 1990 (4); 19 Mar 1991 (5); Triangulos Oeste reef, West bay, 19 Mar 1991 (2); Triangulos Oeste reef, East bay, 19 Mar 1990 (1); Cayo Arcas, North bay, 10 Mar 1990 (12); 17 Mar 1991 (6); Cayo Arcas, South bay, 10 Mar 1990 (50); 17 Mar 1991 (12); Cayo Arcas, Southeast bay, 23 Mar 1991 (117), 10 Mar 1990 (2); Cayo Arcas, South bay, 17 Mar 1991 (166); Cayo Arcas, Northeast bay, 17 Mar 1991 (134); Cayo Arenas, Southwest bay, 21 Mar 1991 (1).

Diagnosis.—Best preserved specimen complete, 16.5 mm long, 1.5 mm wide, 71 setigers, no pigmentation pattern. Prostomium longer than wide, with pair of digitiform antennae extending from distal region of prostomium slightly past the palps. Two pairs of rounded eyes in rectangular arrangement, anterior pair clearly visible, posterior pair covered by peristomium. Palps long with conical palpostyle. Peristomium as long as first two setigers, with 4 pairs of tentacular cirri, longest pair extending to setiger 3 (Fig. 3a).

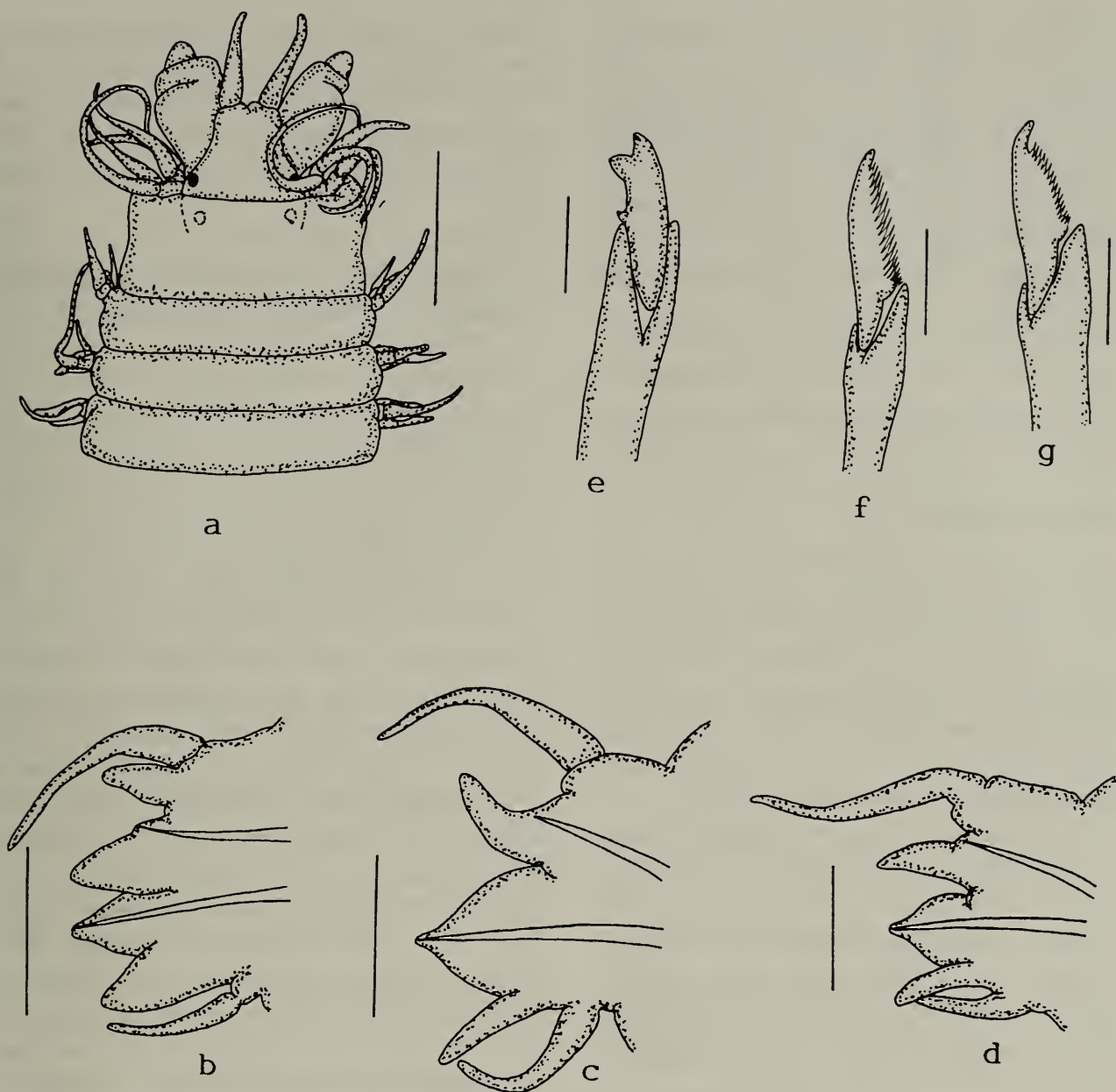


Fig. 3. *Nereis panamensis*: a, Anterior end, dorsal view; b, 10th setiger, anterior view; c, 30th setiger, anterior view; d, 58th setiger, anterior view; e, Notopodial homogomph falciger from setiger 30; f, Neuropodial heterogomph falciger of supraacicular position from setiger 10; g, Neuropodial heterogomph falciger of infraacicular position from setiger 58. Scale bars: a = 1 mm; b–d = 150 μ m; e–g = 15 μ m.

Paragnaths arranged on pharyngeal areas as follows: I: 0; II: 3 cones in a row; III: 3 in a row; IV: 9 3 in 2 rows; V: 0; VI: 3 in one row; VII–VIII: 6 in one row. Jaws dark brown with 8 teeth.

In anterior parapodia, notopodia with 2 ligules, dorsal one smaller, small flange representing the superior lobe present. Postsetal lobe of neuropodia conical distally, ventral ligule wide basally. Dorsal and ventral cirri subequal (Fig. 3b). Notopodial dorsal ligule in median and posterior parapodia represented only by small flange associated

with basal region of dorsal cirrus, notopodial median ligule subulate. Neuropodia with postsetal lobe distally conical, ventral ligule slender (Fig. 3c–d).

Homogomph notopodial spinigers in anterior parapodia substituted in median and posterior parapodia by homogomph falcigers, appendage of latter with two blunt distal teeth, and small tooth on margin (Fig. 3e). Neuropodia with homogomph spinigers and heterogomph falcigers in supraacicular position in all parapodia, latter with slender appendix, strongly spinulate on

margin in anterior parapodia (Fig. 3f); Infracircular ones, including heterogomph spinigers and falcigers, appendix similar in anterior parapodia to these of supracircular falcigers, in posterior ones appendix somewhat smaller, and spinulation on the margin shorter (Fig. 3g).

Pygidium with pair of long anal cirri. Anus terminal.

Discussion.—Fauchald (1977) mentioned that in this species only one pair of eyes is present, but in the specimens examined for this study, a second pair was observed, covered by the anterior part of the peristomium.

Salazar-Vallejo & Jimenez-Cueto (1997) noted that San Martín's record (1994) for Cuba, could be *Nereis kauderni* Fauvel, but the absence of the notopodial superior lobes in posterior parapodia suggests that the Cuban record does belong to *N. panamensis*, since in *N. kauderni* two notopodial lobes in posterior parapodia are present.

Distribution.—Western Atlantic. Known from the Caribbean region, reported from Panama and Cuba as well as from Klein Curaçao, Anguilla, St. Barts, St. Vincent, Aruba, Jamaica and Saba. In this study its range is extended to the coral islands of the southern Gulf of Mexico, and it is the first record for Mexico.

Habitat.—In interstices of coralline rock fragments.

Nereis pelagica Linnaeus, 1758

Nereis pelagica: Fauvel, 1923:336, fig. 130a-f.—Imajima 1961:85.—1967:422.—1972:142, fig. 48a-m.—Imajima & Hartman, 1964:147.—Pettibone, 1963:179, fig. 42d-h.—Day, 1967:315, fig. 14.7f-j.—Taylor, 1984:31.42, fig. 31.40a-g.

Material examined.—ICML-UNAM: IMCA IV expedition, Cayo Arcas, 3 Oct 1989 (7); 4 Mar 1989 (1).

Distribution.—Cosmopolitan. Known from the Arctic, from Norway to the Mediterranean Sea, Azores, western coast of Africa, Atlantic coast of North America from

Hudson Bay to the Gulf of Mexico, Behring Sea to Panama, Japan, Kerguelen Islands, Strait of Magellan, Mexican littoral areas, recorded from Baja California Norte, Baja California Sur, Sonora, Sinaloa, and Veracruz.

Habitat.—Rocky substrates, associated with algal mats, soft and hard bottoms from intertidal zone down to continental shelf.

Nereis riisei Grube, 1857

Nereis riisei Grube 1857:162.—Monro, 1933:43.—Hartman, 1940:221, pl. 33, fig. 37.—Fauchald, 1977:31, fig. 8c-e.—Taylor, 1984:31.38, fig. 31.36a-g.

Nereis (Nereis) riisei: Day, 1973:39, fig. 5g-j.—Gardiner, 1976:152; fig. 15o-r.

Material examined.—ZMUA: Bonaire, Kralendijk, near Pasanggrahan, Sep 1930 (1); Anguilla, north sandy ground, 19 Jun 1949 (1); St. Eustatius, south Tumble Down, Dick Bay, 10 Jul 1949 (1); St. Eustatius, Billy Gut, 13 Jul 1949 (8); Aruba, Seroe Colorado, Oostpunt, 2 May 1955 (8); Curaçao, Piscadera Baai, entrance east, 28 Sep 1963 (10); Curaçao, Piscadera Baai, north, 2nd buoy, 31 Oct 1963 (6); Curaçao, Piscadera Baai, central part, 3rd buoy, 31 Oct 1963 (26); Curaçao, Piscadera Baai, northeast, small bay, 25 Nov 1963 (2); Curaçao, Piscadera Baai, northeast, 11 Dec 1963 (13); Curaçao, Piscadera Baai, southeast part, 18 Dec 1963 (6); the Désirade, Grande Anse, near breadge, 23 Jan 1964 (1); Barbados, 0.5 mi. off Hometown, 19 Nov 1964 (3); St. Vincent, Calliwater bay, near Johnson Pt., 10 Jul 1967 (1); Grenada, Hog Island near Pt. Salines, 8 Jul 1967 (7); Barbuda, Great Lagoon entrance at Billy Pt., west, 22 Jul 1967 (2); Antigua, Dickinson Bay pier, 28 Aug 1967 (3); Curaçao, St. Joris Baai, south, shore, 23 Oct 1968 (40); Curaçao, St. Joris Baai, northwest bay, 25 Feb 1970 (6); Jamaica, Drunkemans Key, 15 Jun 1973 (2); F. Bonet coll., Alacran Reef, 18 Apr 1955 (2); USNM: Smithsonian-Bredin Caribbean Expedition IV, Stn. 52-60, Ascención Bay, just behind cen-

ter of Nicchehabin Reef, east of Allen Point, 10 Apr 1960 (23); Stn. 67-60, Ascención Bay, behind central part of Nicchehabin Reef, 13 Apr 1960 (19); Stn. 72-60, Ascención Bay, central part of Nicchehabin Reef, 14 Apr 1960 (46); Stn. 77-60, north end of Ascención Bay, shore, just east of Halfway Point, 15 Apr 1960 (5); Stn. 83-60, Ascención Bay, mangrove inlet behind Allen Point light, 16 Apr 1960 (1); Stn. 82-60, behind central part of Nicchehabin Reef, 16 Apr 1960 (9); Stn. 87-60, north of Ascención Bay, southwest of Suliman Point, 17 Apr 1960 (2); Stn. 91-60, inner side Nicchehabin Reef, 18 Apr 1960 (1); Stn. 95-60, Ascención Bay, Suliman Point, 19 Apr 1960 (10); Stn. 100-60, north of Santa Maria Point, south end of Cozumel Island, 21 Apr 1960 (3); Stn. 118-60, San Miguel, Cozumel Island, 29 Apr 1960 (1). ICML-UNAM: *Imca IV* expedition, Cayo Arcas, 4 Oct 1989 (1); *Dinamo I, III* expeditions, 10 Mar 1990 (1); Alacran Reef, West bay, 18 Mar 1990 (10); 23 Mar 1991 (23); Alacran Reef, East bay, 23 Mar 1991 (4); Triangulos Oeste reef, 19 Mar 1991 (7); Cayo Nuevo, 24 Mar 1991 (1).

Distribution.—Amphi-American. Gulf of California to Panama, Gulf of Mexico down to the Caribbean Sea.

Habitat.—Soft bottoms, intertidal zone, under rocks, among sponges on mangrove roots, in the interstices of algae-sponges association, in algal rhizoids.

Perinereis anderssoni Kinberg, 1866

Perinereis anderssoni Kinberg, 1866:175; Fauchald, 1977:31, fig. 8a–b; Hartman, 1951 47, pl. 13, fig. 6; de León-González & Solís-Weiss, 1998:675, fig. 1a–g.

Material examined.—MZUA: Bonaire, Kralendijk, near Pasanggrahan, 5 Sep 1930 (1).

Distribution.—Amphi-American. From the Gulf of Mexico to Uruguay, and for Juan Fernández Island, Chile.

Habitat.—Rocky substrate, associated with algal mats.

Perinereis cariboea de León-González & Solís-Weiss, 1998

Perinereis cariboea de León-González & Solís-Weiss, 1998:677, fig. 3a–e.

Material examined.—ZMUA: Klein Bonaire, East coast at landing place, 13 Sep 1948 (1); St. Eustatius, Tumble Down, Dick Bay, 10 Jul 1949 (1).

Distribution.—Antilles and Mexican Caribbean area.

Habitat.—Among rocks and in sands, intertidal.

Perinereis cariacensis Liñero-Arana, 1983

Perinereis cariacensis Liñero-Arana 1983: 5, fig. a–e.

Material examined.—ZMUA: Bonaire, Kralendijk, near Pasanggrahan, 09/1930 (3).

Distribution.—Known only from Venezuela and Bonaire.

Habitat.—Rocky beaches, intertidal.

Perinereis elenacasoae Rioja, 1947

Perinereis elenacasoae: Rioja 1947:531.

Perinereis elenacasoae: Salazar-Vallejo, 1989:50.—de León-González & Solís-Weiss, 1998:680, figs. 4A–E, 5A–D.

Perinereis obfuscata: Berkeley & Berkeley, 1960:359 (in part).

Perinereis anderssoni: Rioja, 1961:295, figs. 12–15 (in part).

Material examined.—ZMUA: Bonaire, South of Kralendijk, near Hoop, May 1930 (3); Bonaire, Kralendijk, near Pasanggrahan, 5 Sep 1930 (57); Klein Bonaire, east coast at landing place, 13 Sep 1948 (2); Bonaire, Paloe Lechis of Salinja, 24 Feb 1949 (10); St. Eustatius, Tumble Down, Dick Bay, 10 Jul 1949 (1); Curaçao, Piscadera Baai, entrance east, 28 Sep 1963 (1); Curaçao, Piscadera Baai, north., 2nd buoy, 31 Oct 1963 (2); Curaçao, Piscadera Baai, central part, 3rd buoy, 31 Oct 1963 (3); Barbados, Conset Bay (St. John), 7 Jul 1967

(4); Curaçao, St. Joris baai, northwest bay, 25 Feb 1970 (14).

Distribution.—Amphi-American. Mexican Pacific from Puerto Peñasco, Sonora to Salina Cruz, Oaxaca; Gulf of Mexico, Caribbean Sea, Brazil.

Habitat.—Rocky substrates, among rhizoids of algae attached to rocks in breakwaters and in coral rocks.

Perinereis floridana (Ehlers 1868)

Nereis floridana: Ehlers, 1868:503.

Perinereis floridana: de León-González & Solís-Weiss, 1998:683, figs. 6a–e, 7a–e.

Material examined.—ZMUA: St. Barts, South Public, near Gustaria, 4 Jun 1949 (1); Klein Bonaire, east coast of landing place, 13 Sep 1948 (1); Klein Curaçao, west shore, 1 Oct 1948 (2); Barbados, Conset Bay (St. John), 7 Jul 1967 (2).

Distribution.—Western Atlantic. Known from the greater Caribbean region.

Habitat.—Associated with coral rocks, intertidal.

Platynereis dumerilii (Audouin & Milne-Edwards, 1834)

Platynereis dumerilii: McIntosh, 1885:224, pl. 35, figs. 7–9, pl. 16A, figs. 14–16.—Day, 1967:306, figs. 14.4d–k.—Fauvel, 1977:31, fig. 4d–f.

Material examined.—ZMUA: Bonaire, Kralendijk, near Pasanggrahan, 5 Sep 1930 (2); Margarita, Punta Mosquito, near Polormar, 4 Jun 1936 (10); Klein Bonaire, east coast at landing place, 13 Sep 1948 (3); Klein Bonaire, west shore, 1 Oct 1948 (5); Bonaire, Paloe Lechis of Salinja, 24 Feb 1949 (1); St. Barts, South Public, near Gustaria, 4 Jun 1949 (5); St. Eustatius, South Tumble Down, Dick Bay, 10 Jul 1949 (25); St. Eustatius, Billy Gut, 13 Jul 1949 (84); Florida, east of Soldier Key, 5 Sep 1963 (7); Puerto Rico, Parguera, Mata de the Gata, 12 Sep 1963 (5); Curaçao, Piscadera Baai, central Part, 3rd buoy, 31 Oct 1963 (2); Curaçao, Piscadera Baai, north, 2nd

buoy, 31 Oct 1963 (1); Curaçao, Piscadera Baai, northeast, 11 Oct 1963 (1); Margarita, Puente de La Restinga, 11 Jan 1964 (2); Barbados, Conset Bay (St. John), 7 Jul 1967 (34); Guadeloupe, Rivière Salée, La Manche à Eau, 16 Jul 1967 (1); Antigua, Dickinson Bay pier, 28 Jul 1967 (2); Bonaire, Lac entrance, 200m west of Cai, 11 Aug 1967 (3); Curaçao, St. Jorisbaai, northwest bay, 25 Feb 1970 (3); Jamaica, Drunkemans Key, 15 Jun 1973 (15); Anguilla, Cocus Bay, north, 3 Aug 1973 (14); USNM: Smithsonian-Bredin Caribbean Expedition IV, Stn. 34-60, San Miguel, Cozumel Island, near anchorage northwest of main dock, 03 Apr 1960 (3); Stn. 35-60, Espiritu Santo Bay, 5 Apr 1960 (9); Stn. 44-60, north end of Ascención Bay, small inlet behind Allen Point, 7 Apr 1960 (2); Stn. 52-60, Ascención Bay, just behind center of Nicchehabin Reef, east of Allen Point, 10 Apr 1960 (2); Stn. 60-60, Allen Point, Ascención Bay, where last sand beach adjoins mangroves, 12 Apr 1960 (1); Stn. 61-60, near Allen Point, 12 Apr 1960 (1); Stn. 72-60, Ascención Bay, central part of Nicchehabin Reef, 14 Apr 1960 (2); Stn. 82-60, behind central part of Nicchehabin Reef, 16 Apr 1960 (2); Stn. 87-60, north of Ascención Bay, 200–300 yds. southwest of Suliman Point, 17 Apr 1960 (2); Stn. 91-60, inner side, Nicchehabin Reef, 18 Apr 1960 (10); Stn. 95-60, Ascención Bay, Suliman Point, 19 Apr 1960 (11); Stn. 100-60, north of Santa Maria Point, Cozumel Island, 21 Apr 1960 (1). ICML-UNAM: *Dinamo I* expedition, Cayo Arcas, North bay, 10 Mar 1990 (1).

Distribution.—Cosmopolitan in tropical and subtropical waters.

Habitat.—Associated with hard substrates between algal mats. Specimens forming mucous tubes were collected in brown algal fronds.

Pseudonereis gallapagensis Kinberg, 1866

Pseudonereis gallapagensis: Hartman, 1940:231.—Fauvel, 1953:215, fig. 110a–

c—Rioja 1961:297.—Wesenberg-Lund, 1962:84, fig. 32.—Imajima, 1972:97, fig. 28a–j.—Fauchald, 1977:32, fig. 4g–h.—Rozbaczylo & Bolados, 1980.—219, fig. a–d.—Wu et al., 1985:220, fig. 124a–f.—Bastida-Zavala, 1993:30.

Material examined.—ZMUA: Bonaire, Lagoen, southeast corner, 28 Oct 1930 (1); Margarita, Punta Mozquito, near Porlamar, 4 Jun 1936 (1); Klein Curaçao, west shore, 1 Oct 1948 (2); St. Eustatius, South Tumble Down, Dick Bay, 10 Jul 1949 (34); Saba, East Fort Bay, 21 Jul 1949 (36); Aruba, Seroe Colorado, Oostpunt, 2 May 1955 (14); Saba, Covebay at flat point, 5 Oct 1963 (9); Curaçao, Piscadera Baai, central part, 3rd buoy, 31 Oct 1963 (1); Grand Cayman, south of Jackson's Point, 9 Jun 1973 (33).

Distribution.—Cosmopolitan in tropical to temperate waters Galapagos Islands, Peru, Chile, Panama, Hawaii Islands, Marshall Islands, Samoa, New Caledonia, China, Japan, India, Sri Lanka, Madagascar, Cape of Good Hope, Cameroon, Brazil and Gulf of Mexico.

Habitat.—Associated with rocky bottoms, and coral substrates.

Stenoninereis martini Wesenber-Lund,
1958

Stenoninereis martini Wesenberg-Lund, 1958:9, fig. 2–4.—Pettibone, 1971:39, figs. 23–24.—Williams et al., 1976:83.—Hartmann-Schröder, 1977.—Gardiner & Wilson, 1979:165.—Hernández-Alcántara & Solís-Weiss, 1991:251.—1995:117.—de León-González & Solís Weiss, 1998:199, fig. 1a–d.

Material examined.—ZMUA: St. Martin, Devils Hole Swamp, 14 Oct 1963 (32).

Distribution.—Western Atlantic greater Caribbean region (type locality St. Martín Island and Sarasota, Florida), western Gulf of Mexico (Texas), Cuba, North Carolina and Laguna de Términos, Campeche.

Habitat.—Soft bottoms, associated with roots of grassbeds.

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Literature Cited

- Bastida-Zavala, J. R. 1993. Taxonomía y composición biogeográfica de los poliquetos (Annelida: Polychaeta) de la bahía de La Paz, B.C.S., México.—*Revista de Investigación Científica* 4:11–39.
- Berkeley, E., & C. Berkeley 1960. Notes on some Polychaeta from the west coast of Mexico, Panama, and California.—*Canadian Journal of Zoology* 38:362.
- Day, J. H. 1967. A Monograph on the Polychaeta of southern Africa.—British Museum (Natural History) Publications 656:878 pp.
- . 1973. New Polychaeta from Beaufort, with a key to all species recorded from North Carolina.—NOAA Technical Reports NMFS Circ 375; 53 pp.
- de León-González, J. A., & V. Solís-Weiss. 1997. A new species of *Stenoninereis* (Polychaeta: Nereididae) from the Gulf of Mexico.—*Proceedings of the Biological Society of Washington* 110:198–202.
- , & ———. 1998. The genus *Perinereis* (Polychaeta: Nereididae) from Mexican littoral waters, including the description of three new species and the redescription of *P. anderssoni* and *P. elenacasoae*.—*Proceedings of the Biological Society of Washington* 111:674–693.
- Dueñas, P. R. 1981. Inventario preliminar de los Poliquetos (ANNELIDA) de aguas someras de la Bahía de Cartagena y areas adyacentes.—Bol-

- etín Museo del Mar (Universidad de Bogotá) 10:82–138.
- Ehlers, E. 1868. Die Borstenwürmer (Annelida Chaetopoda) nach Systematischen und Anatomischen Untersuchungen Dargestellt. Leipzig. Wilhelm Engelmann. xxiv + 748 pp., 24 pls (pp. 1–268, pls. 1–11 published in 1864).
- . 1887. Report on the Annelids. Reports on the result of dredging, under the direction of Pourtales & Agassiz in the Gulf of Mexico.—Memoirs of the Museum of Comparative Zoology at Harvard College 15:1–335.
- Fauchald, K. 1977. Polychaetes from intertidal areas in Panama, with a review of previous shallow-waters records.—Smithsonian Contributions to Zoology 221:1–85.
- Fauvel, P. 1923. Polychètes Errantes. Faune de France. Le Chevalier Editeurs, Paris, 5:1–488.
- . 1953. The fauna of India including Pakistan, Ceylon, Burma and Malaya. Annelida Polychaeta. Indian Press, Allahabad, xii + 507.
- Gardiner, S. L. 1976. Errant polychaete annelids from North Carolina.—The Journal of the Elisha Mitchell Scientific Society 91(3):77–220.
- , & H. Wilson, Jr. 1979. New records of Polychaete Annelids from North Carolina with the description of a new species of *Sphaerosyllis* (Syllidae).—The Journal of the Elisha Mitchell Scientific Society 93(4):159–172.
- Grube A. E. 1857. Annulata Oerstediana. Enumeratio Annulorum, quae in itinere per Indiam occidentalem et Americanam centricam annis 1845–1848 suscepto legit cl. A. S. Oersted, adjectis speciebus nonnullis a cl. H. Kroyer in itinere ad Americam meridionalem collectis 2:158–166.
- . 1874. Descriptiones Annulorum novorum mare Ceylonicum habitantium ab honoratissimo Holdsworth collectorum.—Proceedings of the Zoological Society of London 1874:325–329.
- Harper, D. 1979. *Nereis (Neanthes) micromma* n. sp. (Polychaeta: Nereidae) from the northern Gulf of Mexico with a note on the structure of nereidid palps.—Contributions to Marine Sciences 22:91–103.
- Hartman, O. 1940. Polychaetous annelids, 2. Chrysopetalidae to Goniadidae.—Allan Hancock Pacific Expeditions 7:173–287.
- . 1945. The marine annelids of North Carolina.—Bulletin of Duke University Marine Station 2:1–54.
- . 1951. The littoral marine annelids of the Gulf of Mexico.—Publications of the Institut of Marine Science, University of Texas 2:7–124.
- Hartmann-Schröder, G. 1971. Annelida, Borstenwurm, Polychaeta.—Tierwelt Deutschlands 58:1–594.
- . 1977. The genera *Ceratocephale* Malmgren, *Olganereis* n. gen., and *Profundilycastis* n. gen. (Nereidae, Polychaeta) with a key to the nereid genera without chitinous paragnaths. Pp. 141–156 in D. J. Reish and K. Fauchald, eds., Essays on Polychaetous Annelids in Memory of Dr. Olga Hartman, eds, Allan Hancock Foundation, University of Southern California, Los Angeles, 604 pp.
- . 1985. Revision der Gattung *Ceratonereis* Kinberg (Nereididae, Polychaeta) (Mit besonderer Berücksichtigung der Arten mit eingeschnittenem Prostomium).—Mitteilungen Hamburg Zoology Museum Institut. 82:37–59.
- Hernandez-Alcántara, P., & V. Solís-Weiss, 1991. Ecological aspects of the polychaete populations associated with the red mangrove *Rhizophora mangle* at Laguna de Términos, Southern part of the Gulf of Mexico.—Ophelia Supplement 5: 451–462.
- , & ———. 1995. Algunas comunidades macrobénticas asociadas al manglar (*Rhizophora mangle*) en Laguna de Términos, Golfo de México.—Revista de Biología Tropical 43:117–129.
- Horst, R., 1924. Polychaeta Errantia of the Siboga-Expedition. Part III. Nereidae and Hesioniidae.—Siboga-Expedition Leyden 99(24):145–198.
- Imajima, M. 1961. Polychaetous annelids collected off the west coast of Kamchatka I. Notes on species found in the collection of 1957–58.—Publications of Seto Marine Biological Laboratory 11: 81–102.
- . 1967. Errant polychaetous annelids from Tsukumo Bay and vicinity of Noto Peninsula, Japan.—Bulletin of the National Science Museum of Tokyo 10:403–441.
- . 1972. Review of the annelid worms of the family Nereidae of Japan, with description of five new species or subspecies.—Bulletin of the National Science Museum, Tokyo, Japan 15: 37–153.
- , & O. Hartman. 1964. The polychaetous annelids of Japan.—Allan Hancock Occasional Papers, 26:1–452.
- Kinberg, J. G. H. 1866. Annulata nova.—Ofversigt af Svenska Kongliga Vetenskaps-Akademiens Förhandlingar 22:167–179.
- Liñero-Arana, I. 1983. Dos nuevas especies de Nereidae (Polychaeta: Errantia) de la costa oriental de Venezuela.—Boletín del Instituto Oceanográfico de Venezuela, Universidad de Oriente, 22:3–6.
- McIntosh, W. C. 1885. Report on the Annelida Polychaeta collected by H. M. S. Challenger during the years 1873–76.—Challenger Reports 12:1–554.
- Monro, C. C. A. 1933. The polychaeta Errantia collected by Dr. C. Crossland at Colón, in the Pan-

- ama Region, and the Galapagos Islands during the expedition of the S. Y. "St. George".—Proceedings of the Zoological Society of London 1933:1–96.
- Ochoa-Rivera, V. 1996. Criptofauna poliquetológica de los principales arrecifes del Sur del Golfo de México: Cayo Arcas, Triángulos Oeste, Cayo Arenas y Arrecife Alacrán. Tesis profesional. Facultad de Ciencias, Universidad Nacional Autónoma de México, 101 pp.
- Perkins, T. H. 1980. Review of species referred to *Ceratonereis mirabilis* and new species of *Ceratonereis*, *Nephtys* and *Goniada*.—Proceedings of the Biological Society of Washington 93:1–49.
- Pettibone, M. H. 1956. Some polychaetous worms of the families Hesionidae, Syllidae, and Nereidae from the east coast of North America, West Indies, and Gulf of Mexico.—Journal of the Washington Academy of Sciences 46:281–94.
- . 1963. Marine polychaete worms of the New England region, 1. Aphroditidae to Trochochaetidae.—Bulletin of the United States National Museum 227:1–356.
- . 1967. Type-specimens of polychaetes described by Edith and Cyril Berkeley (1923–1964).—Proceedings of the United States National Museum 119:1–23.
- . 1971. Revision of some species referred to *Leptonereis*, *Nicon* and *Laeonereis* (Polychaeta: Nereididae).—Smithsonian Contributions to Zoology 104:1–53.
- Rioja, E. 1946. Nereidos de aguas Salobres de los esteros del litoral del Golfo de México.—Anales del Instituto de Biología, México 17:205–214.
- . 1947. Observaciones sobre algunos neréidos de las costas de México.—Anales del Instituto de Biología, México 18:527–535.
- . 1962. Adiciones a la fauna de anélidos poliquetos de las costas orientales de México.—Anales del Instituto de Biología, México 31:289–316.
- Rozbacylo, N., & J. Bolados, 1980. Nereidos de Iquique, Chile (Polychaeta: Nereidae).—Boletín del Museo Nacional de Historia Natural de Chile 37:205–224.
- Salazar-Vallejo, S. I. 1989. Enrique Rioja y su contribución al estudio de los poliquetos (Annelida: Polychaeta) en México.—Brenesia 30:39–65.
- , J. A. de León-González, & J. C. Chavez-Comparán. 1990. Poliquetos (Annelida: Polychaeta) de la bahía de Manzanillo, con una clave ilustrada para las especies de Colima, México.—Revista de Biología Tropical 38:211–229.
- , & M. S. Jimenez-Cueto, 1997. Neréidos (Polychaeta) del Caribe Mexicano con una clave para las especies del Gran Caribe.—Revista de Biología Tropical 44/45:361–377.
- San Martín, G. 1994. Anélidos poliquetos procedentes de la I Expedición Cubano-Española a la Isla de la Juventud y Archipiélago de los Canarreos. V. Familia Nereididae.—Revista de Investigación Marina 14:3–9.
- Taylor, J. L. 1984. Nereidae Johnston, 1845. Pp. 31.1–31.42 in J. M. Uebelacker & P. G. Johnson, eds., Taxonomic guide to the polychaetes of the northern Gulf of Mexico, Volume V. Barry A. Vittor and Associates. Inc., Mobile, Alabama.
- Treadwell, A. L. 1924. Polychaetous annelids, collected by the Barbados-Antigua Expedition from the University of Iowa in 1918.—University of Iowa Studies in Natural History 10:1–23.
- . 1929. New species of polychaetous annelids in the collections of the American Museum of Natural History from Porto Rico, Florida, Lower California, and British Somaliland.—American Museum Novitates 392:1–13.
- . 1939. Polychaetous annelids of Porto Rico and vicinity. Scientific Surveys of Porto Rico and the Virgin Islands.—New York Academy of Sciences 16:151–319.
- Wesenberg-Lund, E. 1958. Lesser antillean polychaetes chiefly from brackish water with a survey and a bibliography of fresh and brackish-water polychaetes.—Studies on the Fauna of Curaçao and other Caribbean Islands 8:1–41.
- . 1962. Polychaeta Errantia.—Reports of the Lund University Chile Expedition 1948–49. Lunds University Årsskrift, N.F., Avd. 2, 57:1–139.
- Williams, G. E., M. J. Poff, & J. T. McBee. 1976. Western Gulf of Mexico records of *Stenoninereis martini* Wesenberg-Lund 1958 (Polychaeta, Nereidae) with contributions to its habitat ecology.—Contributions in Marine Sciences 20:83–85.
- Wu, B., S. Ruiping, & D. J. Yang. 1985. The Nereidae (Polychaetous Annelids) of the Chinese coast. China Ocean Press, Beijing and Springer-Verlag, Berlin, vi + 234 pp.